What is claimed is:

1. A metal mask for use with a circuit board (2) having an electrode (21) formed in a predetermined pattern to join an end portion of a lead member (6) thereto for applying a lead-free solder paste (30) to the electrode (21) of the predetermined pattern, the metal mask being characterized in that the metal mask has two openings (11a, 11b) formed at a position corresponding to the position of the electrode (21) on the circuit board (2) and arranged in a direction in which the lead member (6) is to extend from the electrode (21) toward other circuit, the two openings (11a, 11b) being each circular or elliptical in shape.

2. A metal mask according to claim 1 wherein the two openings (11a, 11b) are each in the shape of an ellipse having a minor axis in said direction in which the lead member (6) is to extend.

3. A metal mask according to claim 1 wherein the first (11a) of the two openings (11a, 11b) which is positioned closer to said end portion of the lead member (6) to be joined to the electrode (21) on the circuit board (2) is smaller than the other second opening (11b) in area.

4. A metal mask according to claim 3 wherein the area ratio of the first opening (11a) to the second opening (11b) is 1:1.5 to 1:3.

5. A metal mask according to claim 1 wherein the two openings (11a, 11b) are so sized that opposite ends thereof in directions orthogonal to said direction in which the lead member (6) is to extend bulge out of the electrode (21) on the circuit board (2) toward the respective directions.

6. A metal mask according to claim 5 wherein the opening (11b) of the two openings (11a, 11b) which is positioned toward said direction in which the lead member is to extend is so sized that an end thereof toward said direction in which the lead member is to extend bulges out of the electrode (21) on the circuit board (2) toward said same direction.

7. A metal mask according to claim 1 wherein the two openings (11a, 11b) are in communication with each other at side portions thereof.

8. A lead-free solder paste printing method comprising placing a metal mask (1) on a circuit board (2) having an electrode (21) formed in a predetermined pattern to join an end portion of a lead member (6), and moving a printing squeegee (4) along an upper surface of the metal mask (1) to thereby print a lead-free solder paste (30) on a surface of the electrode (21) on the circuit board (2), the printing method being characterized in that the metal

mask (1) has two openings (11a, 11b) formed at a position corresponding to the position of the electrode (21) on the circuit board (2) and each having a circular or elliptical shape, and that two lead-free solder paste patterns (30a, 30a) are printed on the electrode (21) by using the metal mask (1), the two solder paste patterns being arranged in a direction in which the lead member (6) is to extend from the electrode (21) toward other circuit.

9. A lead-free solder paste printing method according to claim 8 wherein the first (11a) of the two openings (11a, 11b) of the metal mask (1) which is positioned closer to said end portion of the lead member (6) to be joined to the electrode (21) on the circuit board (2) is smaller than the other second opening (11b) in area.

10. A lead-free solder paste printing method according to claim 9 wherein the area ratio of the first opening (11a) of the metal mask (1) to the second opening (11b) thereof is 1:1.5 to 1:3.

11. A lead-free solder paste printing method according to claim 8 wherein the two openings (11a, 11b) of the metal mask (1) are so sized that opposite ends thereof in directions orthogonal to said direction in which the lead member (6) is to extend bulge out of the electrode (21) on the circuit board (2) toward the respective

directions.

12. A lead-free solder paste printing method according to claim 11 wherein the opening (11b) of the two openings (11a, 11b) of the metal mask (1) which opening is positioned toward said direction in which the lead member is to extend is so sized that an end thereof toward said direction in which the lead member is to extend bulges out of the electrode (21) on the circuit board (2) toward said same direction.

13. A lead-free solder paste printing method according to claim 8 wherein the lead-free solder paste (30) comprises a solder consisting mainly of tin and containing silver, or a solder consisting mainly of tin and containing silver and copper.